

CALIFORNIA DEPARTMENT OF WATER RESOURCES
DIVISION OF FLOOD MANAGEMENT

DWR Maintenance Area Budget: FY 2019/20

Mark List, PG, CEG, CHG

Supervising Engineering Geologist

Chief, Maintenance Support Branch

Flood Maintenance Office, DWR

Div. of Flood Mgmt.

Department of Water Resources

State Plan of Flood Control

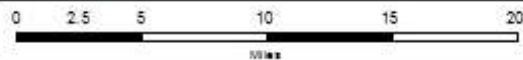
Operations and Maintenance Responsibilities

- California Water Code Section 8361(a)-(p)
 - O&M costs - State General Fund
 - Sacramento River Flood Control Project
 - ~ 1,200 miles of channels (flood flow conveyance)
 - Pumping Plants, Hydraulic Control Structures, Weirs, Certain Seepage and Collecting Canals, specific Bridges
 - Levees (~145 miles)
- California Water Code Section 12878 et seq.
 - O&M costs – reimbursed by benefiting properties
 - Maintenance Areas
 - Levees (~150 miles)
 - 10 designated areas

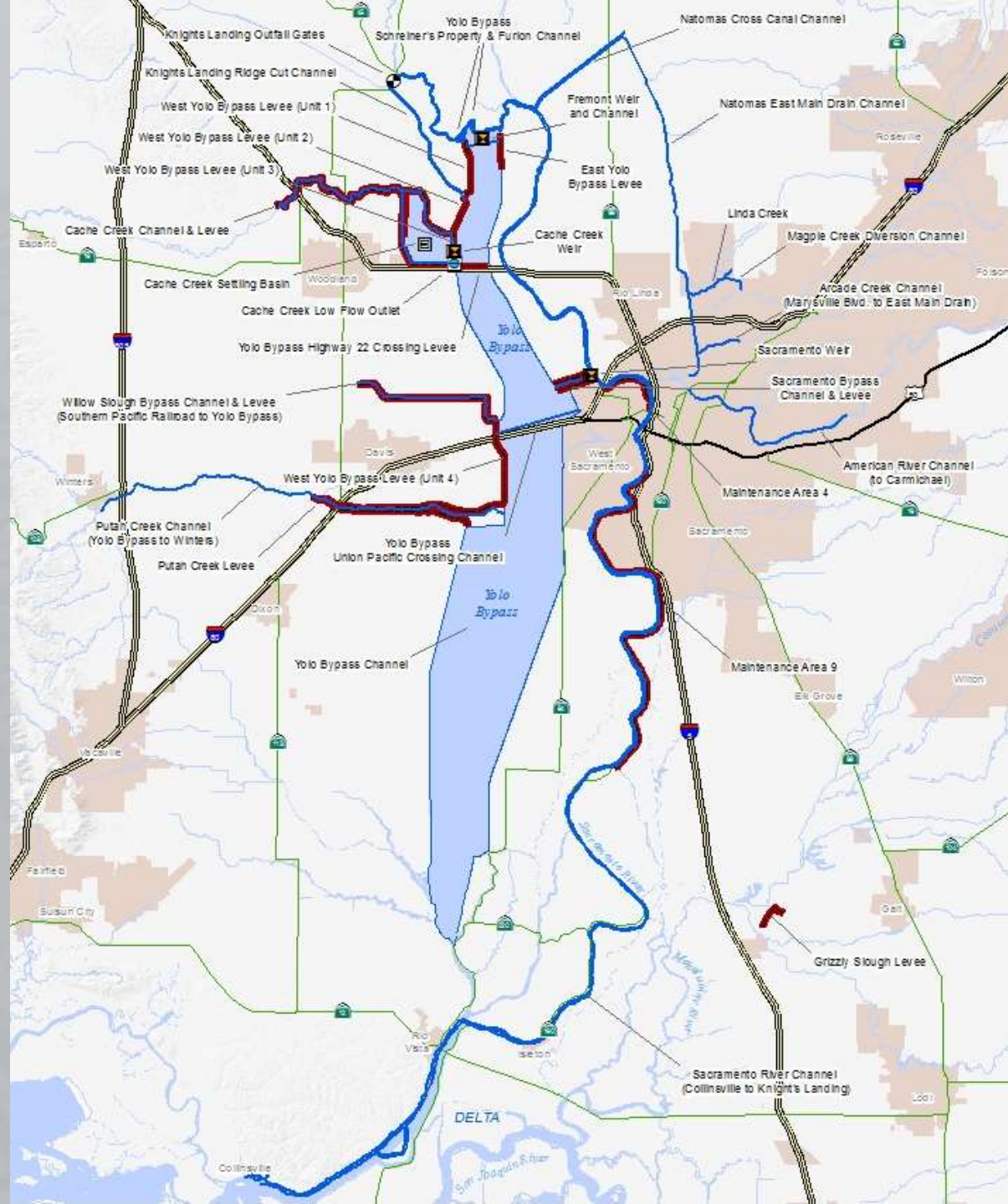
DWR Sacramento Yard Areas of Responsibility

DWR SACRAMENTO YARD MAINTENANCE PROJECT AREAS

Department of Fish and Game Routine Maintenance Agreement



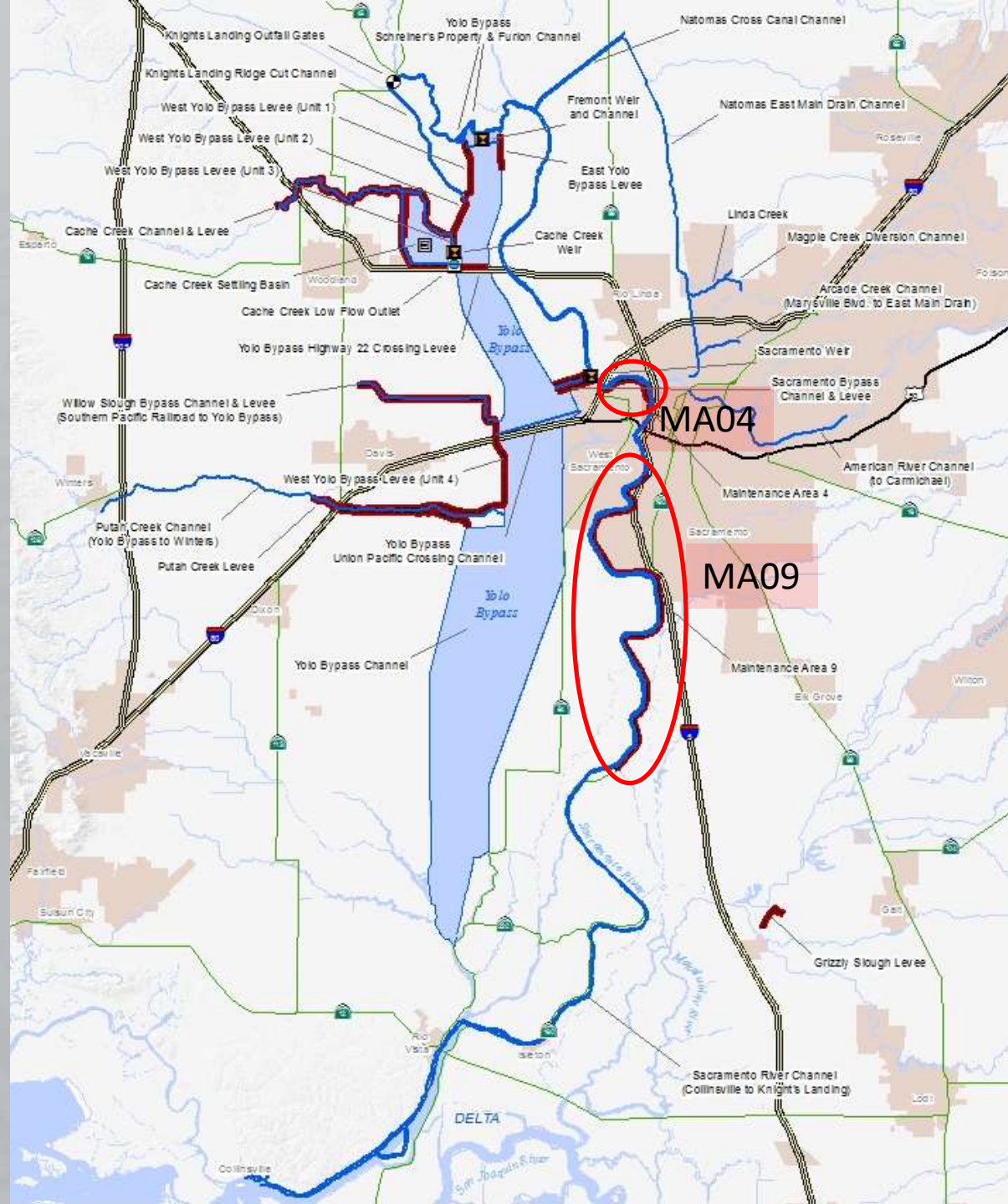
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**DWR SACRAMENTO YARD
MAINTENANCE PROJECT AREAS**
Department of Fish and Game Routine Maintenance Agreement

0 2.5 5 10 15 20
feet

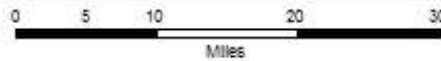
		Channel		Divers ion Structure
		Levee		Low Flow Outlet
		Bridge		Outfall Gate
		Weir		Pumping Plant



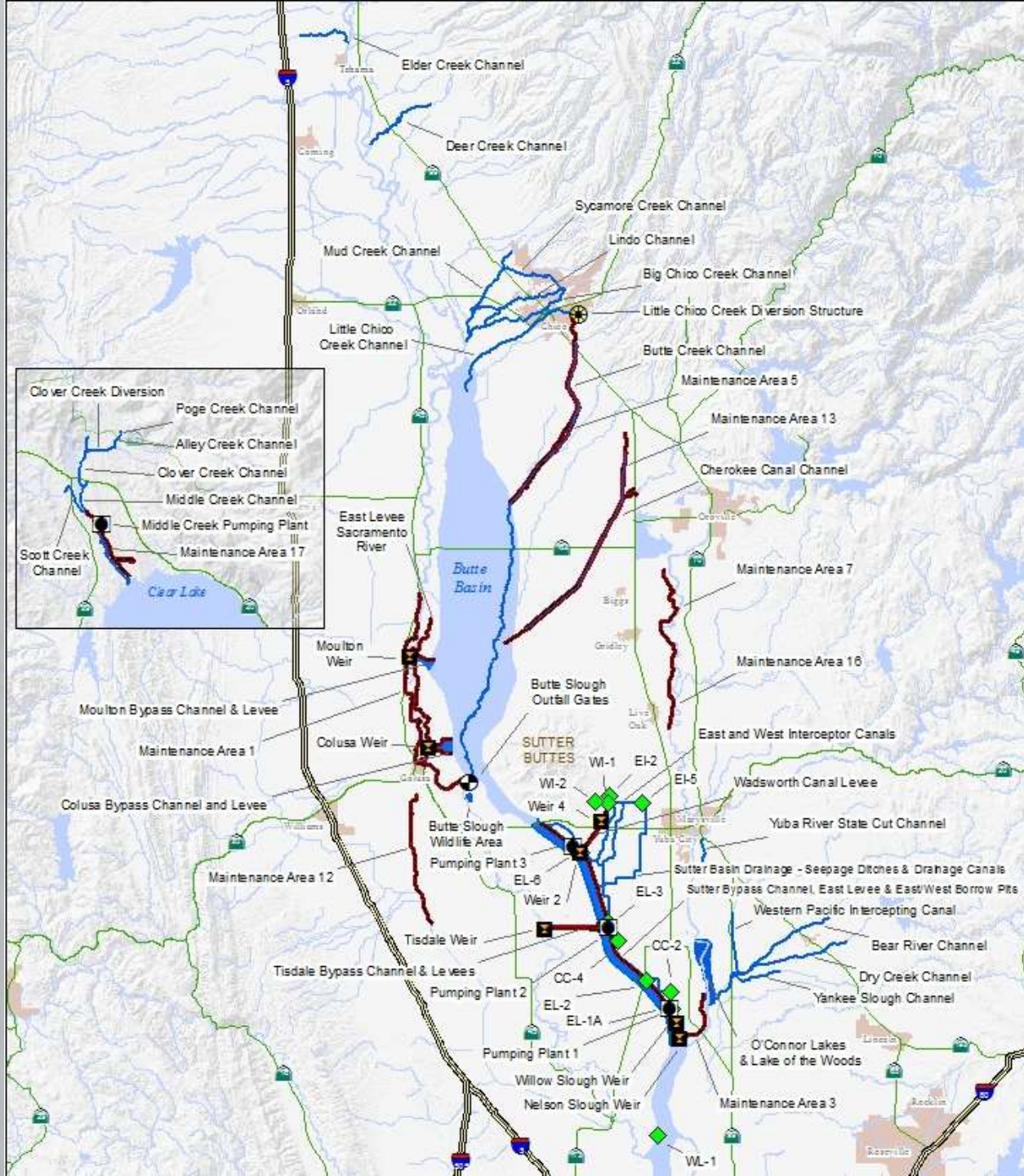
DWR Sutter Yard Areas of Responsibility

DWR SUTTER YARD MAINTENANCE RESPONSIBILITIES

Department of Fish and Game Routine Maintenance Agreement



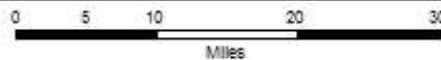
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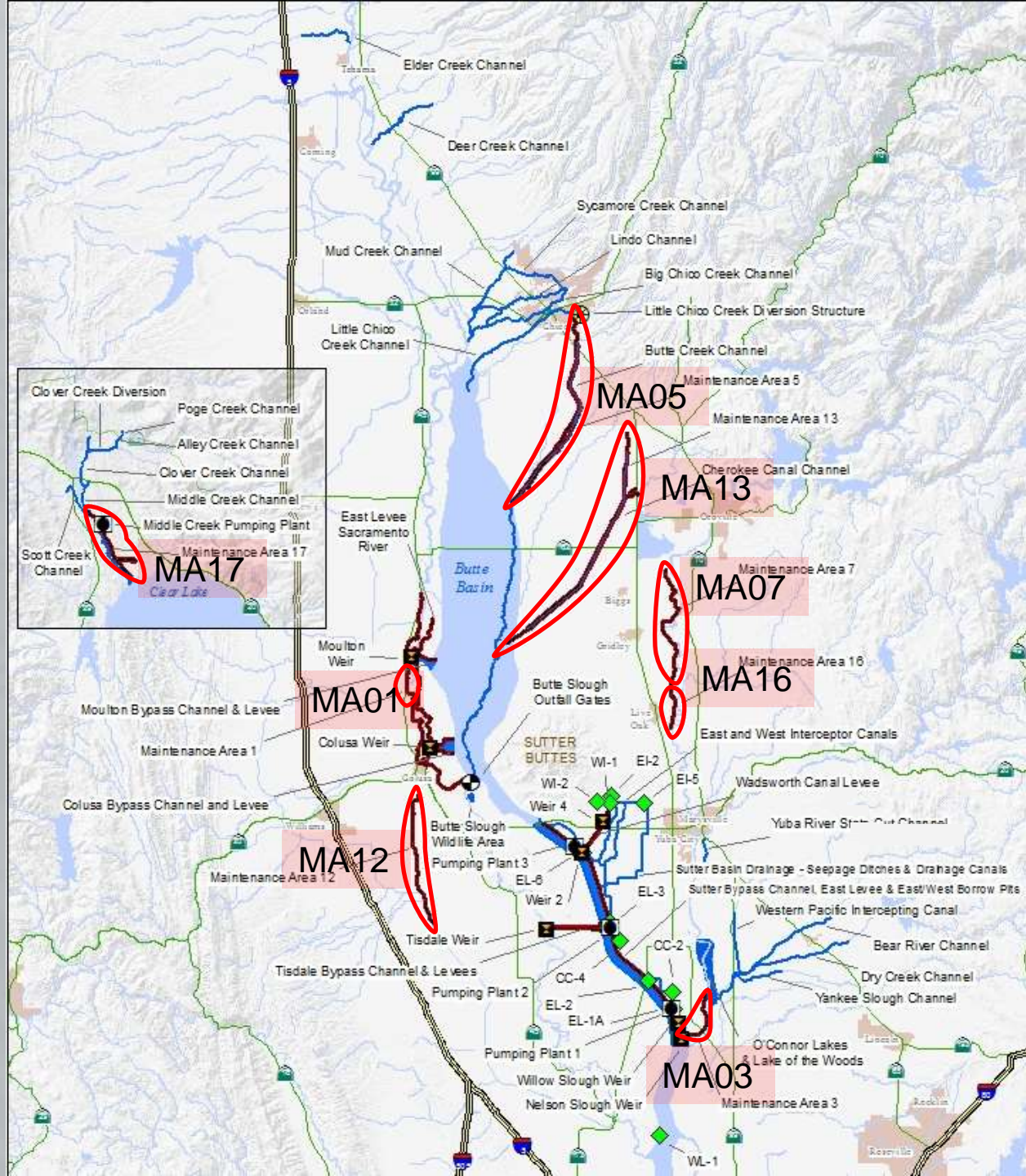
DWR Sutter Yard Areas of Responsibility

DWR SUTTER YARD MAINTENANCE RESPONSIBILITIES

Department of Fish and Game Routine Maintenance Agreement



(NOT TO SCALE)



DWR Actions in Response to Periodic Inspection Results

- **Encroachments**
 - Easement Identification continuing throughout system
 - Address encroachments that pose levee threat
 - “worst-first” in all areas
 - Referring enforcement items to CVFPB staff
- **Culverts/Discharge Pipes**
 - Utility Crossing Inventory Program Database Developed
 - Risk based assessment and pipe repair program (DMP)
 - Completed reconnaissance to determine pipe accessibility and environmental issues at all SPFC pipes
 - MA Video Evaluation completed on 81 pipes, with 70* remaining (*pipe access for evaluation restricted by irrigation water)
- **Vegetation**
 - Routine Maintenance to meet visibility and accessibility criteria
 - California Levee Research Program – High Hazard Trees

DWR Actions in Response to Periodic Inspection Results - Continued

- **Animal Control**

- All areas implementing DWR's Rodent Abatement/Damage Repair and Rehabilitation Program
 - Completed evaluation for GGS habitat presence or absence (about half of all DWR maintained levees in GGS habitat)
 - Rodent damage repair restricted by Fed ESA and CA ESA in areas with GGS habitat, pending State and federal permitting
 - Rodent Damage Repair (primarily grouting) under CA DFW Routine Maintenance Agreement where no GGS habitat
 - Rodent Damage Repair within GGS habitat requires new State permits under EPOM/CESA and Section 7 BO (USFWS)
 - MA05 "Pilot" SWIF Workplan to initiate Section 7 Consultation

O&M Restrictions Due to Potential GGS Habitat

MA	Length (miles)	Approximate length prohibited from grouting due to GGS (without CESA Take Permit)	
		(miles)	(%)
MA 1	16.8	0.3	2%
MA 3	5.1	1.2	24%
MA 4	3.58	0	0%
MA 5	32.7	17	52%
MA 7	11.9	0	0%
MA 9	19.5	0	0%
MA 12	11.4	9.4	82%
MA 13	40.1	35.4	88%
MA 16	4.1	0	0%
MA17	3.86	Out of Range for GGS habitat	
Overall		63.3	42%

Note: Approximately 49% of 8361 levees are also restricted from grouting due to potential GGS habitat. This grouting moratorium started Feb of 2013.

DWR Actions in Response to Periodic Inspection Results - Continued

- Areas of concern being addressed during **annual maintenance activities** or under **Small Erosion Repair Program and Flood System Repair Project**, or Systemwide Programs
 - Erosion/Bank Caving Riprap Revetments and Bank Protection
 - Slope Stability
 - Sod Cover/Erosion Rills
 - Depressions/Rutting
 - Settlement
 - (local settlement often caused by burrowing animal activity)

Department Programmatic Levee Maintenance Plan

- **Complete USACE Systemwide Improvement Framework (SWIF) for all DWR levee areas**
 - Regain/Maintain active Public Law (PL) 84-99 status
- **Environmental Permitting Efforts**
 - Env. Permitting for Operations & Maintenance
 - New CA Dept. of Fish & Wildlife (CA Fish & Game Code)
 - Section 1600 (Lake and Streambed Alteration Agreement)
 - Section 2081 (CA Endangered Species Act) Permits (as needed)
 - Federal ESA B.O.s for SWIF Workplan Implementation Actions
 - Seeking Section 7 nexus (USACE 3/21/2014 Interim Policy)
 - SWIF implementation actions, MA05 Pilot Area Workplan
- **Culverts/Discharge Pipes**
 - System pipes evaluated & RR&R on risk basis (Deferred Maintenance Project)
- **Flood Maintenance Assistance Program**
 - MAs eligible and participating in FMAP for improved OMRR&R on behalf of protected properties
- **Flood System Repair Project**
 - Evaluating mechanism for MAs providing FSRP cost-share for eligible repairs

PL 84-99 Rehabilitation Program

Status Summary

MA	PL 84-99 RP Status	Dates
MA 1	Active	LOI approved (3/9/15); SWIF submitted 3/9/17 & awaiting USACE review
MA 3	Active	LOI approved (2/24/14); SWIF submitted 3/22/17 & awaiting USACE review
MA 4	Active	LOI approved (4/12/18); 1-year progress report 4/8/19
MA 5	Active	LOI approved (7/6/17); 1-year progress report 7/3/18
MA 7	Active	LOI approved (2/24/14); SWIF submitted 3/22/17 & awaiting USACE review
MA 9	Active	LOI approved (5/14/14); SWIF submitted 12/18/17 & awaiting USACE review
MA 12	Active	LOI approved (3/9/15); SWIF submitted 3/9/17 & awaiting USACE review
MA 13	Active	LOI approved (5/18/17); 1-year progress report 5/18/18
MA 16	Active	LOI approved (2/24/14); SWIF submitted 3/22/17 & awaiting USACE review
MA17	Inactive	Currently evaluating LOI submittal with Lake County

BENEFITS OF PL 84-99 ACTIVE STATUS

- PL84-99 Rehab Program Storm Damage Repairs – Significant Federal Investment

PL 84-99 Rehabilitation Program

2017 Storm Damage Repair Summary

MA	PL 84-99 Site ID	Status / Repair Schedule	Planned/Actual* Federal Investment (USACE data)	Estimated/Actual* State Cash Cost (LERRDs)
2017 Storm Damage Repair Construction				
MA16	0521-11	Repair Completed / 2017	\$ 1,714,000*	\$ 0*
2018 Damage Repair Construction (2017 Storms)				
MA12	0561-11	Repair Completed / 2018	\$ 1,255,000*	\$ 138,000*
2019 Damage Repair Construction (2017 Storms)				
MA09	0441-23	Repair Planned / 2019	\$ 420,000	\$ 4,000 ⁽²⁾
MA09	0441-21	Repair Planned / 2019	\$ 124,555	\$ 7,165 ⁽²⁾
2020 Damage Repair Construction (2017 Storms)				
MA03	0521-41	Repair Planned / 2020	\$ 48,962,867 ⁽¹⁾	\$ 9,969,500 ⁽²⁾

Total PL 84-99 Expenditures in MAs (Estimated)

\$ 52,123,922

(84% of costs)

\$ 10,118,665

(16% of costs)

Notes:

* Actual Costs for USACE repair and State payment for soil/spoil

(1) 8,900 linear feet seepage repair; cutoff wall design in progress instead of original seepage berm plan

(2) Repair work may include additional work as a betterment, with additional State costs - TBD

CCTV Pipe Evaluation Progress

MA	System Drainage Pipes	Inspected as of April 1, 2019	% Complete
MA 1	7	4	57%
MA 3	3	0	0%
MA 4	0	0	--
MA 5	42	25	56%
MA 7	15	2	13%
MA 9	1	0	0%
MA 12	11	4	36%
MA 13	66	44	67%
MA 16	4	2	50%
MA17	3	0	0%
MA Total	151	81	54%

- 151 pipes in DWR Maintenance Areas
- All DWR pipes are scheduled to be video evaluated by Sep 2019, pending access and irrigation water schedules
- MA13 and MA05 System Pipes scheduled for CIPP Slip-Lining

FY 2018/19 FMAP Funding

MA	Engineering Budget Report Preparation ⁽¹⁾	Improved OMRR&R ⁽²⁾	Total
MA 1	\$20,000	\$161,000	\$181,000
MA 3	\$20,000	\$ 44,000	\$ 64,000
MA 4	\$20,000	\$ 48,366	\$ 68,366
MA 5	\$20,000	\$134,000	\$154,000
MA 7	\$20,000	\$ 86,615	\$106,615
MA 9	\$20,000	\$324,906	\$344,906
MA 12	\$20,000	\$ 87,000	\$107,000
MA 13	\$20,000	\$113,000	\$133,000
MA 16	\$20,000	\$ 46,954	\$ 66,954
MA17	\$20,000	\$ 60,000	\$ 80,000

(1) Funding consultant review of MA budgeting for each MA, and preparing comprehensive budget evaluation identifying funding needs

(2) Improved OMRR&R includes addressing deferred vegetation management (using MA and CCC crews) and deferred/new storm damage repairs

Maintenance Areas

SACRAMENTO MAINTENANCE YARD

MA04 *Sacramento River at West Sacramento*

MA09 *Sacramento River from Sacramento to Freeport*

SUTTER MAINTENANCE YARD

MA01 *Sacramento River from Colusa Bridge to Glenn County Line*

MA03 *Feather River just upstream of Sutter Bypass*

MA05 *Butte Creek*

MA07 *Feather River north of Horncutt Creek in Butte County*

MA12 *Northern half of the Colusa Basin Drain*

MA13 *Cherokee Canal in Butte County*

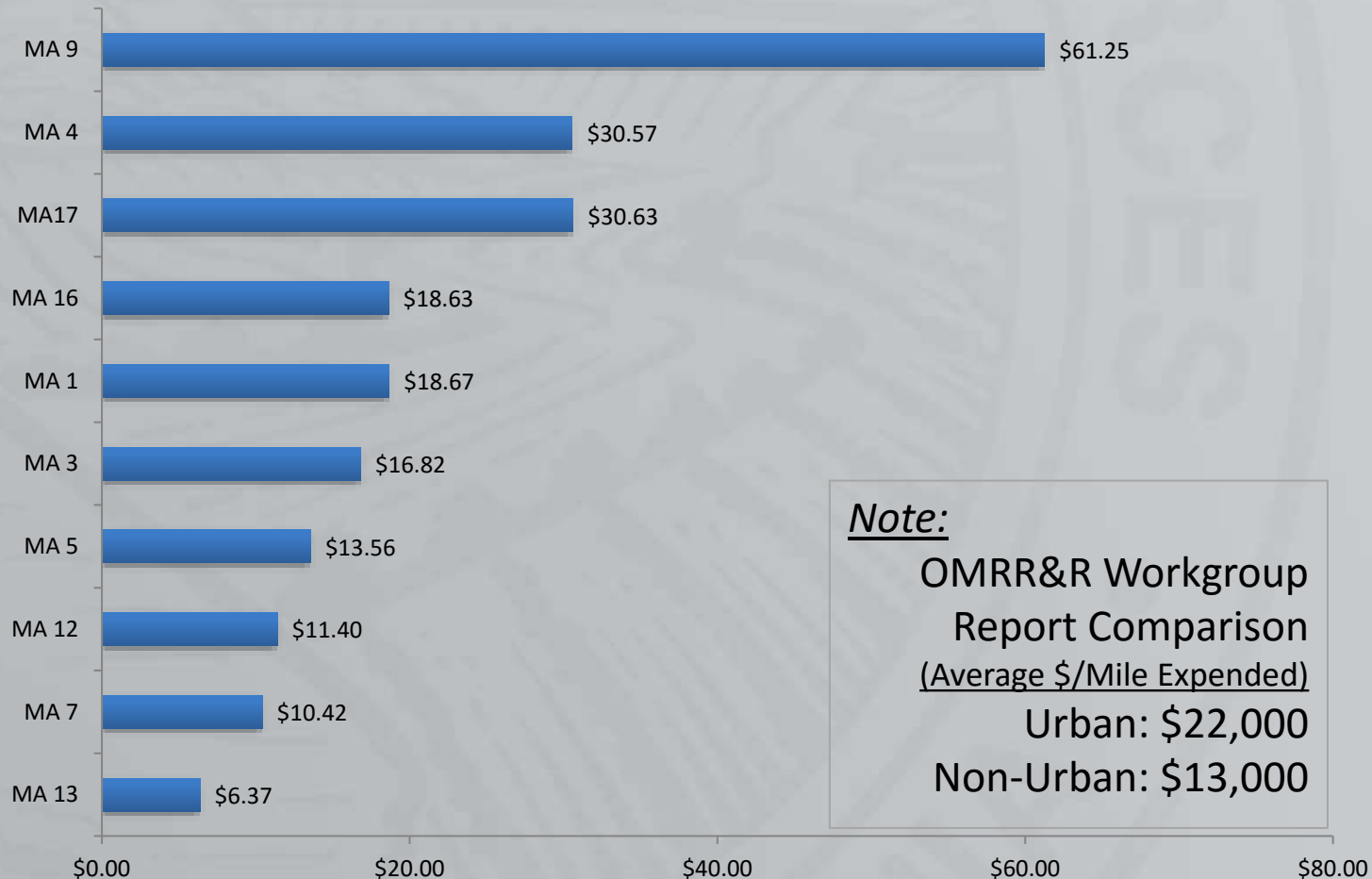
MA16 *Feather River south of Horncutt Creek in Butte County*

MA17 *Lake County near Clear Lake (Middle Creek Pumping Plant)*

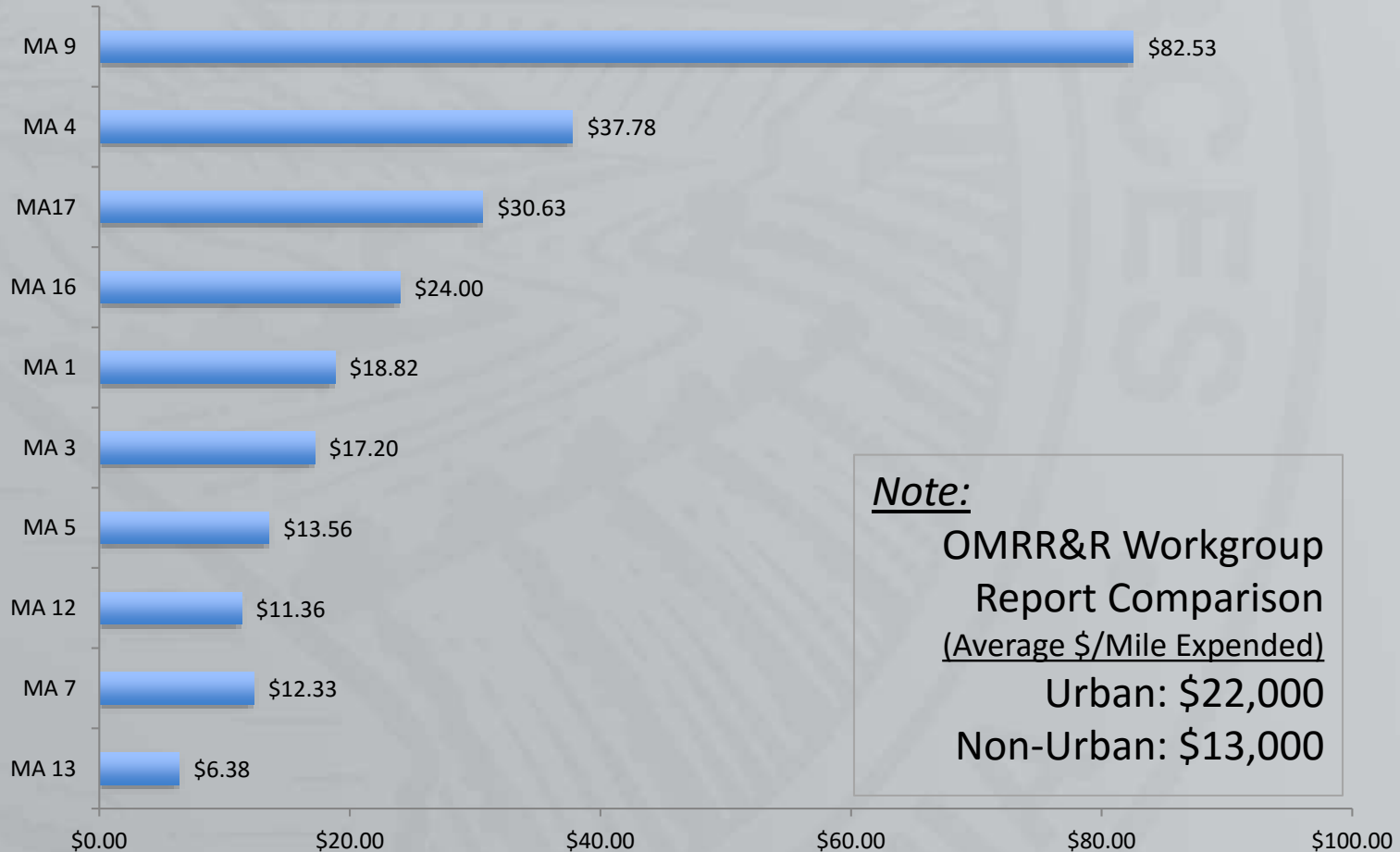


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FY 2018/19 (Closing Fiscal Year) DWR Maintenance Areas Projected Expenditure per Mile (Thousands)



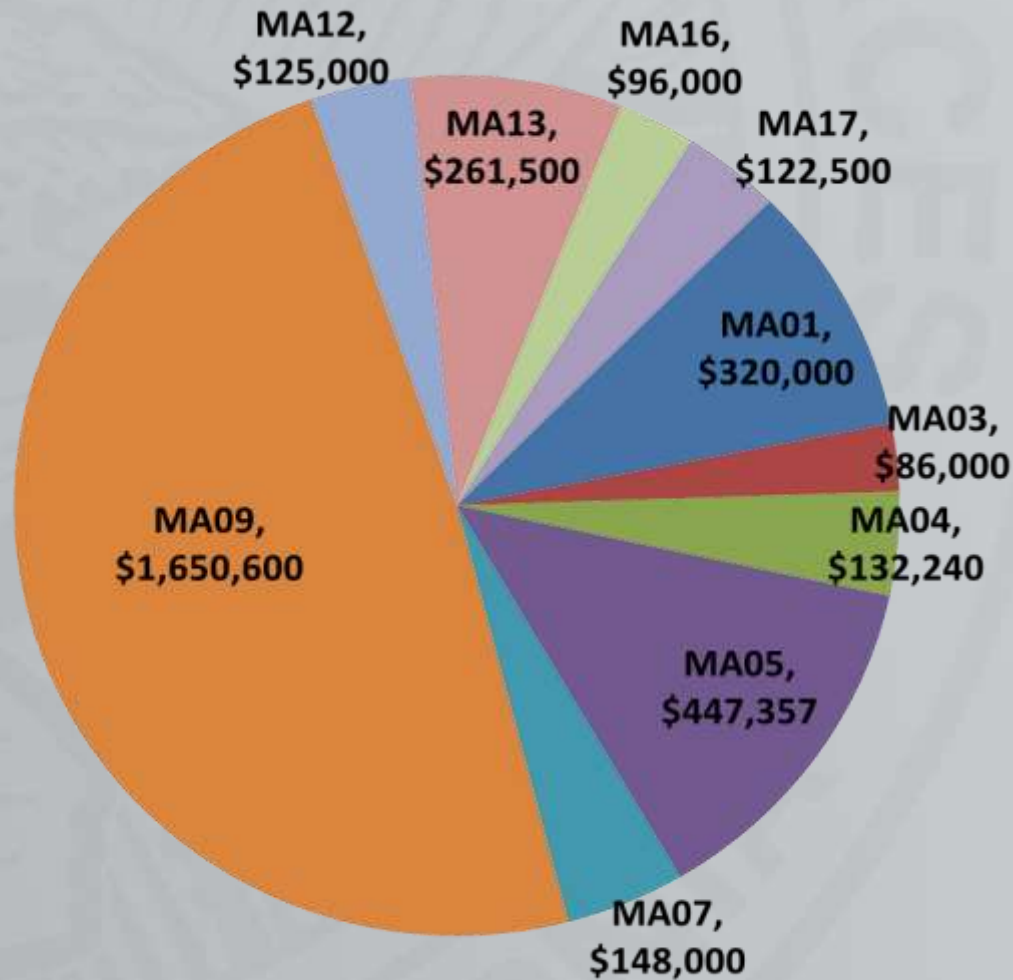
FY 2019/20 DWR Maintenance Areas Proposed Budget per Mile (Thousands)

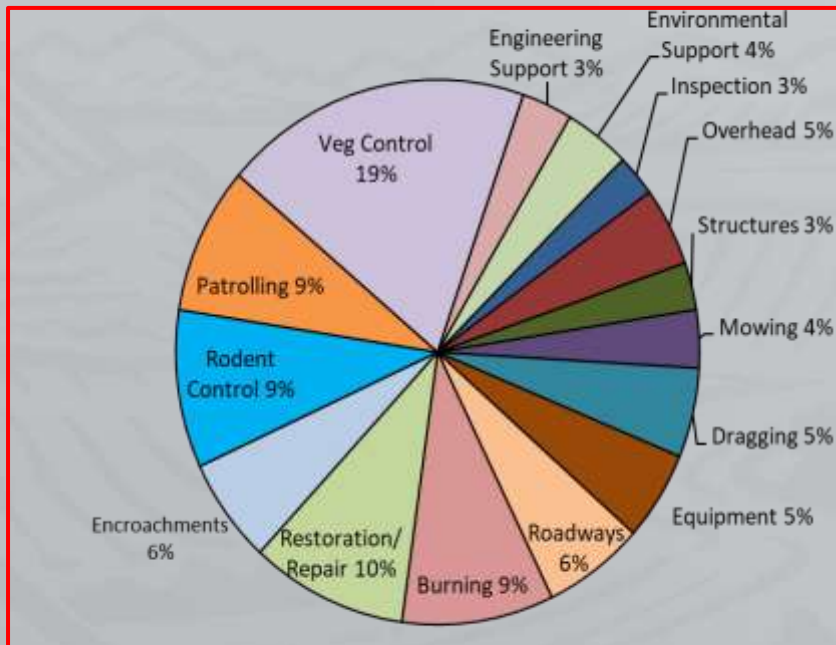


FY 2019/20 Proposed Budget Cost (Average) per Acre in MA

	FY 2019/20 Approved Budget	Acres in MA	\$/Acre	Levee Miles Maintained	\$/Mile
<i>Maintenance Area 01 (MA 1)</i>	\$ 320,000	60,515	\$ 5.29	16.8	\$ 19,047.62
<i>Maintenance Area 03 (MA 3)</i>	\$ 86,000	5,768	\$ 14.91	5.1	\$ 16,862.75
<i>Maintenance Area 04 (MA 4) (Urban)</i>	\$ 132,240	1,121	\$ 117.97	3.58	\$ 36,938.55
<i>Maintenance Area 05 (MA 5)</i>	\$ 447,357	72,291	\$ 6.19	32.7	\$ 13,680.64
<i>Maintenance Area 07 (MA 7)</i>	\$ 148,000	149,175	\$ 0.99	11.9	\$ 12,436.97
<i>Maintenance Area 09 (MA 9) (Urban)</i>	\$ 1,650,600	45,903	\$ 35.96	19.5	\$ 84,646.15
<i>Maintenance Area 12 (MA 12)</i>	\$ 125,000	65,927	\$ 1.90	11.4	\$ 10,964.91
<i>Maintenance Area 13 (MA 13)</i>	\$ 261,500	26,855	\$ 9.74	40.1	\$ 6,521.20
<i>Maintenance Area 16 (MA 16)</i>	\$ 96,000	96,948	\$ 0.99	4.1	\$ 23,414.63
<i>Maintenance Area 17 (MA 17)</i>	\$ 122,500	1,726	\$ 70.97	3.86	\$ 31,735.75
<i>Totals for all MAs</i>	\$ 3,389,197	526,229	\$ 6.44	149.04	\$ 22,740.18

Proposed Maintenance Areas Budget FY 19/20 (\$3,389,197)

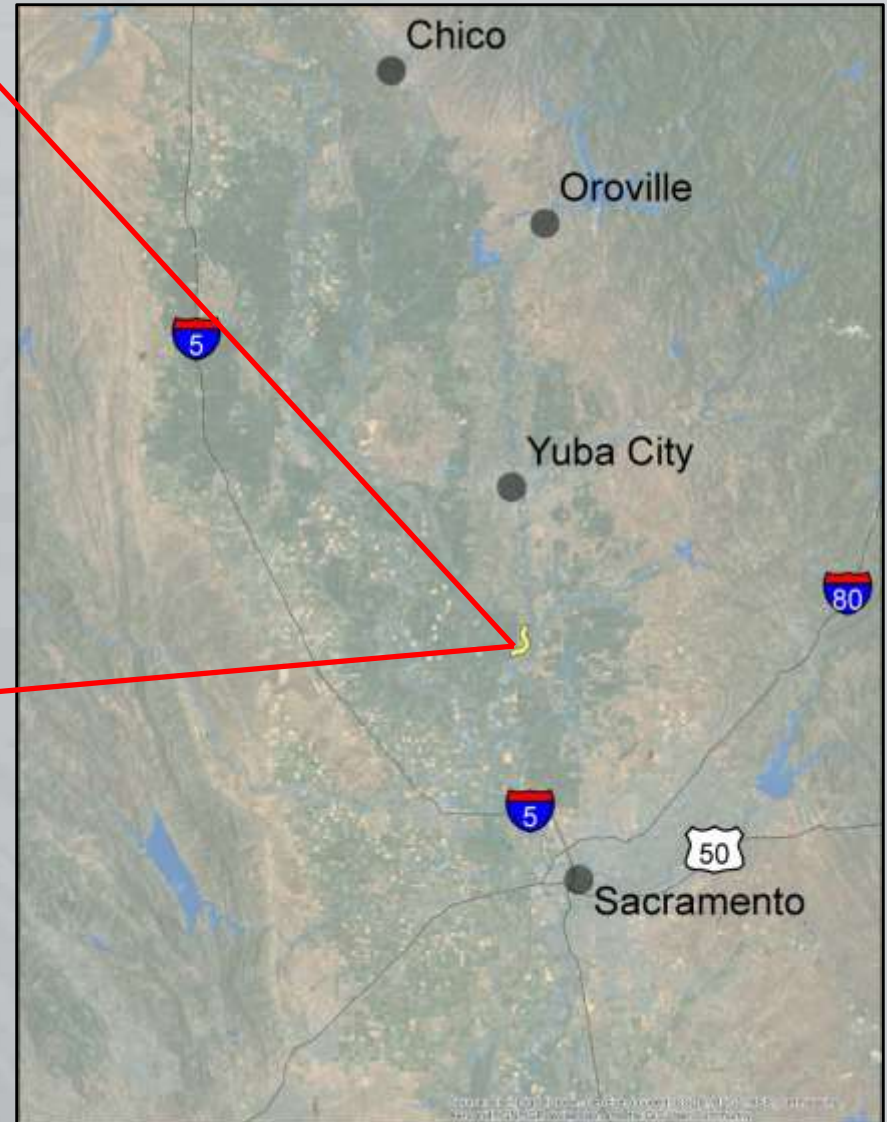
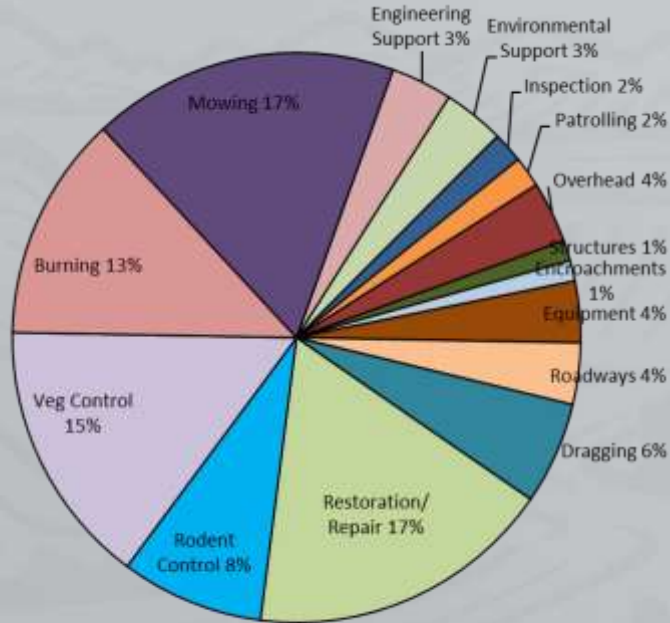




MA01
West Levee of
Sacramento River
Near Colusa
FY19/20 - \$320,000 (proposed)
17 Levee Miles

MA01 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 60,000	\$ 61,000	+2%
Burning	\$ 30,000	\$ 30,000	-
Rodent Control	\$ 30,000	\$ 30,000	-
Patrolling	\$ 28,000	\$ 28,000	-
Mowing	\$ 11,000	\$ 11,000	-
Inspection	\$ 8,000	\$ 8,000	-
Encroachment Removal	\$ 20,000	\$ 20,000	-
Restoration/Repair	\$ 31,000	\$ 31,000	-
Crown Roadways	\$ 20,000	\$ 20,000	-
Minor Structures	\$ 9,000	\$ 9,000	-
Dragging	\$ 15,000	\$ 17,000	+13%
MEO Equipment Costs	\$ 17,000	\$ 17,000	-
Maintenance Yard Overhead	\$ 15,000	\$ 15,000	-
Telemetry Maintenance	\$ -	\$ -	-
Engineering Support	\$ 10,000	\$ 10,000	-
Environmental Support	\$ 13,000	\$ 13,000	-
TOTAL BUDGET	\$ 317,000	\$ 320,000	+0.9%

17 Levee Miles

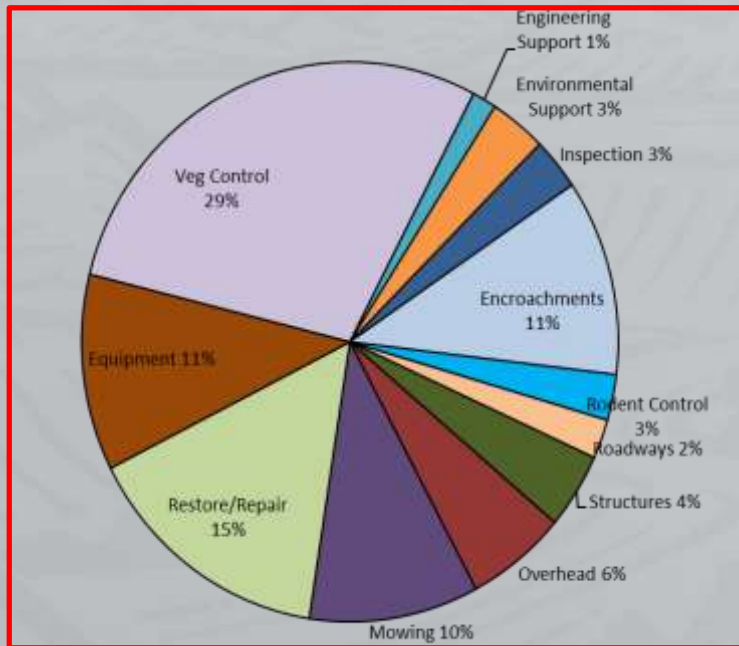


MA03
West Levee
Feather River near
Sutter Bypass
FY19/20 - \$86,000 (proposed)
5 Levee Miles

MA03 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 12,000	\$ 13,000	+8%
Burning	\$ 10,000	\$ 11,000	+10%
Rodent Control	\$ 7,000	\$ 7,000	-
Patrolling	\$ 1,500	\$ 1,500	-
Mowing	\$ 12,000	\$ 15,000	+25%
Inspection	\$ 1,500	\$ 1,500	-
Encroachment Removal	\$ 1,000	\$ 1,000	-
Restoration/Repair	\$ 18,000	\$ 15,000	-17%
Crown Roadways	\$ 3,000	\$ 3,000	-
Minor Structures	\$ 1,000	\$ 1,000	-
Dragging	\$ 5,000	\$ 5,000	-
MEO Equipment Costs	\$ 3,000	\$ 3,000	-
Maintenance Yard Overhead	\$ 3,000	\$ 3,000	-
Telemetry Maintenance	\$ -	\$ -	-
Engineering Support	\$ 3,000	\$ 3,000	-
Environmental Support	\$ 3,000	\$ 3,000	-
TOTAL BUDGET	\$ 84,000	\$ 86,000	+2%

5 Levee Miles

**Note: Extensive FSRP and PL 84-99 Repairs have occurred/in progress since 2017
LD01 (Sutter) exploring consolidation to potentially include MA03**



MA04

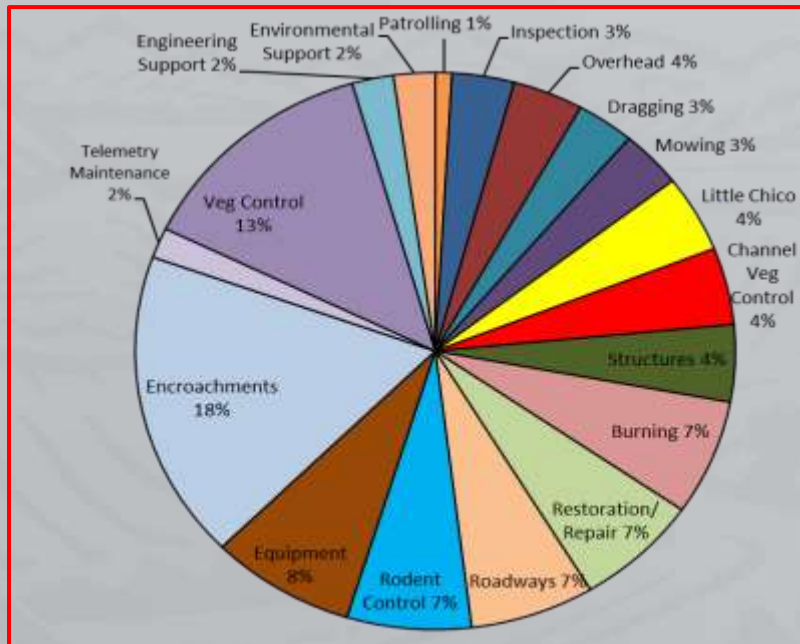
**Sacramento River Levee in
West Sacramento
FY19/20 - \$132,240 (proposed)
3.5 Levee Miles**



MA04 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 38,000	\$ 38,000	-
Burning	\$ -	\$ -	-
Rodent Control	\$ 3,500	\$ 3,500	-
Patrolling	\$ -	\$ -	-
Mowing	\$ 13,500	\$ 13,500	-
Inspection	\$ 4,000	\$ 4,000	-
Encroachment Removal	\$ 10,000	\$ 15,000	50%
Restoration/Repair	\$ 20,000	\$ 20,000	-
Crown Roadways	\$ 3,000	\$ 3,000	-
Minor Structures	\$ 5,800	\$ 5,800	-
Dragging	\$ -	\$ -	-
MEO Equipment Costs	\$ 17,000	\$ 15,000	-12%
Maintenance Yard Overhead	\$ 8,000	\$ 8,000	-
Telemetry Maintenance	\$ -	\$ -	-
Engineering Support	\$ 1,940	\$ 1,940	-
Environmental Support	\$ 7,500	\$ 4,500	-40%
TOTAL BUDGET	\$ 132,240	\$ 132,240	-

3.5 Levee Miles

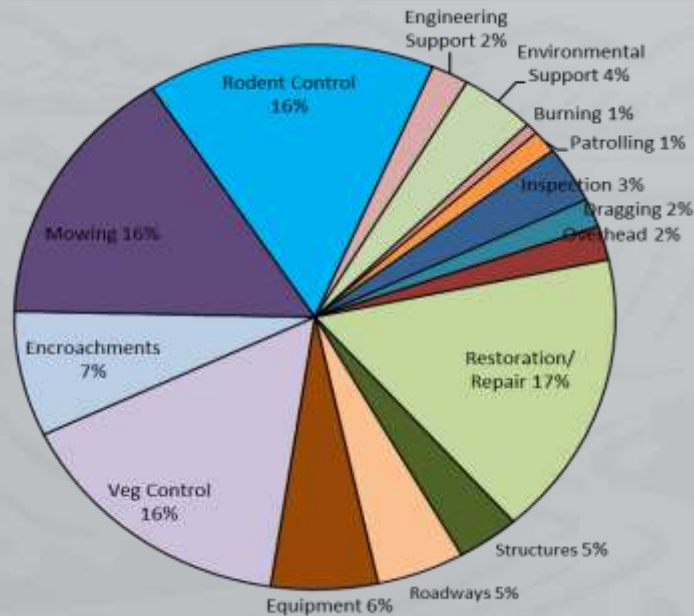
Note: DWR Sacramento Maintenance Yard sits on oversized MA04 levee RD900 exploring consolidation to potentially include MA04



MA05
Butte Creek Levees and
Little Chico
Creek Channel
FY19/20 - \$447,357 (proposed)
33 Levee Miles

MA05 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 59,500	\$ 59,500	-
Burning	\$ 30,000	\$ 30,000	-
Rodent Control	\$ 30,000	\$ 30,000	-
Patrolling	\$ 4,000	\$ 4,000	-
Mowing	\$ 15,000	\$ 15,000	-
Inspection	\$ 15,000	\$ 15,000	-
Encroachment Removal	\$ 80,000	\$ 80,000	-
Restoration/Repair	\$ 30,000	\$ 30,000	-
Crown Roadways	\$ 30,000	\$ 30,000	-
Minor Structures	\$ 20,000	\$ 20,000	-
Dragging	\$ 14,000	\$ 14,000	-
Little Chico Diversion Structure	\$ 20,000	\$ 20,000	-
Sediment Removal	\$ -	\$ -	-
Vegetation Control Channel	\$ 20,000	\$ 20,000	-
MEO Equipment Costs	\$ 35,000	\$ 35,000	-
Maintenance Yard Overhead	\$ 17,000	\$ 17,000	-
Telemetry Maintenance	\$ 7,857	\$ 7,857	-
Engineering Support	\$ 10,000	\$ 10,000	-
Environmental Support	\$ 10,000	\$ 10,000	-
TOTAL BUDGET	\$ 447,357	\$ 447,357	-

33 Levee Miles



MA07

West Levee

Feather River below Oroville

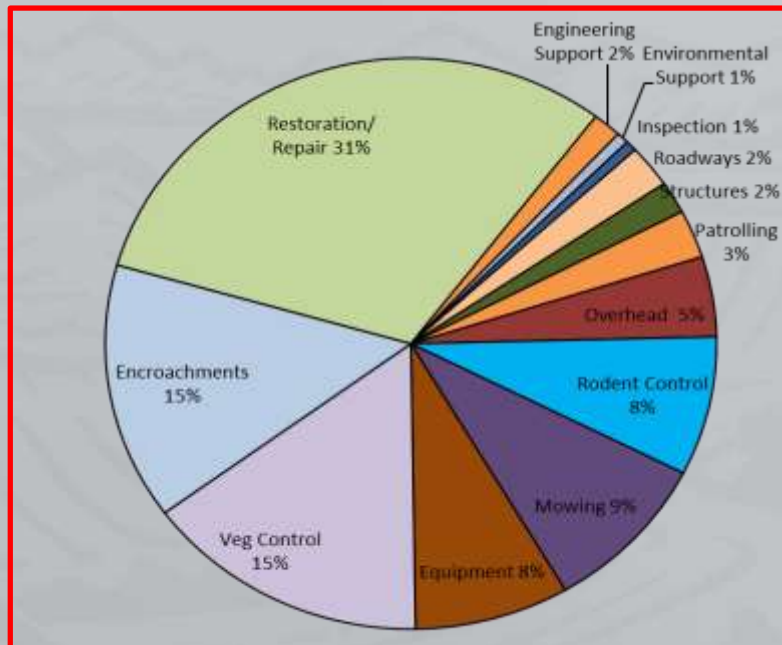
FY19/20 - \$128,000 (proposed)

12 Levee Miles

MA07 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 23,000	\$ 23,000	-
Burning	\$ 1,000	\$ 1,000	-
Rodent Control	\$ 23,000	\$ 23,000	-
Patrolling	\$ 2,000	\$ 2,000	-
Mowing	\$ 23,000	\$ 23,000	-
Inspection	\$ 5,000	\$ 5,000	-
Encroachment Removal	\$ 11,000	\$ 11,000	-
Restoration/Repair	\$ 5,000	\$ 25,000	+400%
Crown Roadways	\$ 7,000	\$ 7,000	-
Minor Structures	\$ 5,000	\$ 5,000	-
Dragging	\$ 2,500	\$ 2,500	-
MEO Equipment Costs	\$ 8,500	\$ 8,500	-
Maintenance Yard Overhead	\$ 3,000	\$ 3,000	-
Engineering Support	\$ 3,000	\$ 3,000	-
Environmental Support	\$ 6,000	\$ 6,000	-
TOTAL BUDGET	\$ 128,000	\$ 148,000	+16%

12 Levee Miles

Note: Budget increase for FSRP cost-share on landside levee slope repair

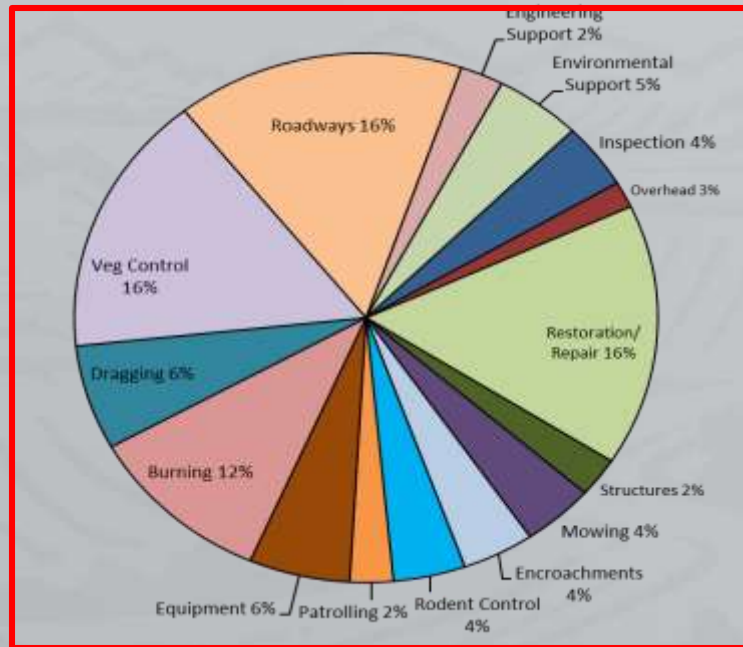


MA09
East Levee of
Sacramento River
in Sacramento
FY19/20 - \$1,650,600
(proposed)
~20 Levee Miles

MA09 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 250,000	\$ 250,000	-
Burning	\$ -	\$ -	-
Rodent Control	\$ 85,000	\$ 130,000	+53%
Patrolling	\$ 45,000	\$ 45,000	-
Mowing	\$ 120,000	\$ 150,000	+25%
Inspection	\$ 10,000	\$ 10,000	-
Encroachment Removal	\$ 240,000	\$ 240,000	-
Restoration/Repair	\$ 540,000	\$ 510,000	-6%
Crown Roadways	\$ 40,000	\$ 40,000	-
Minor Structures	\$ 40,000	\$ 30,000	-25%
Dragging	\$ -	\$ -	-
MEO Equipment Costs	\$ 135,000	\$ 135,000	-
Maintenance Yard Overhead	\$ 75,000	\$ 75,000	-
Telemetry Maintenance	\$ -	\$ -	-
Engineering Support	\$ 60,000	\$ 25,000	-58%
Environmental Support	\$ 10,600	\$ 10,600	-
TOTAL BUDGET	\$ 1,650,600	\$ 1,650,600	-

~20 Levee Miles

Note: Evaluating FSRP seepage repairs for non-urban areas of MA09

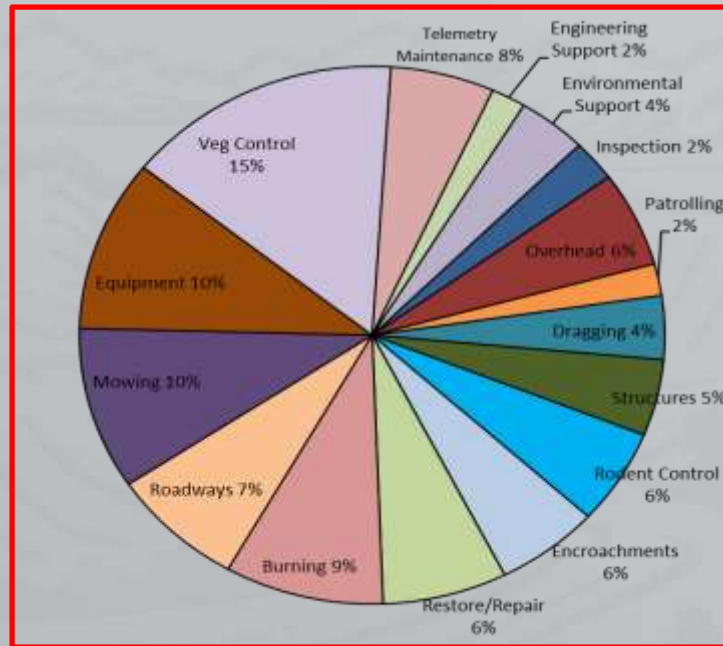


MA12
Colusa Drain Levee
FY19/20 - \$125,000 (proposed)
11 Levee Miles

MA12 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 20,000	\$ 20,000	-
Burning	\$ 13,000	\$ 13,000	-
Rodent Control	\$ 5,000	\$ 5,000	-
Patrolling	\$ 3,000	\$ 3,000	-
Mowing	\$ 5,000	\$ 5,000	-
Inspection	\$ 5,000	\$ 5,000	-
Encroachment Removal	\$ 5,000	\$ 5,000	-
Restoration/Repair	\$ 20,000	\$ 20,000	-
Crown Roadways	\$ 20,000	\$ 20,000	-
Minor Structures	\$ 3,000	\$ 3,000	-
Dragging	\$ 8,000	\$ 8,000	-
MEO Equipment Costs	\$ 7,000	\$ 7,000	-
Maintenance Yard Overhead	\$ 2,000	\$ 2,000	-
Telemetry Maintenance	\$ -	\$ -	-
Engineering Support	\$ 3,000	\$ 3,000	-
Environmental Support	\$ 6,000	\$ 6,000	-
TOTAL BUDGET	\$ 125,000	\$ 125,000	-

11 Levee Miles

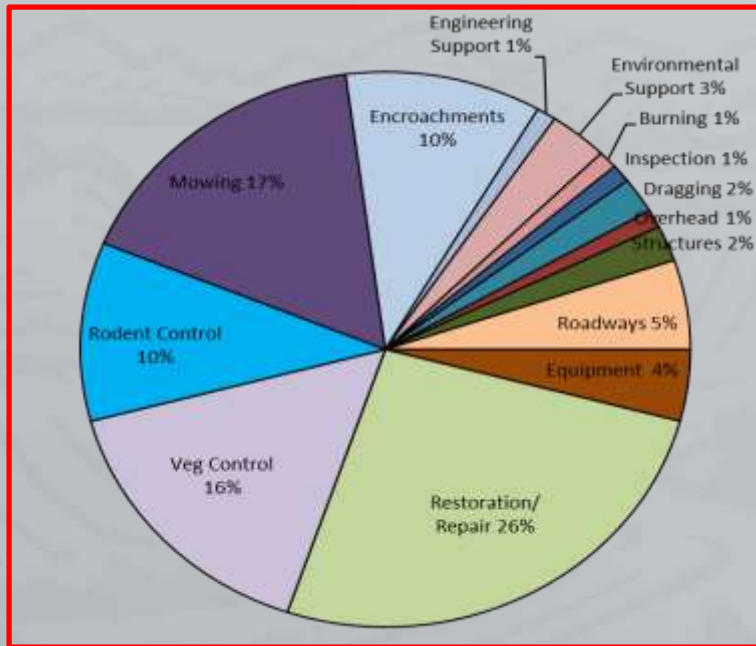
Note: 2018 PL 84-99 Repair completed at no direct cost to MA12



MA13
Cherokee Canal Levees
FY19/20 - \$261,500 (proposed)
41 Levee Miles

MA13 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 40,000	\$ 40,000	-
Burning	\$ 23,000	\$ 23,000	-
Rodent Control	\$ 15,000	\$ 15,000	-
Patrolling	\$ 5,000	\$ 5,000	-
Mowing	\$ 25,500	\$ 25,500	-
Inspection	\$ 6,500	\$ 6,500	-
Encroachment Removal	\$ 15,000	\$ 15,000	-
Restoration/Repair	\$ 18,000	\$ 18,000	-
Crown Roadways	\$ 19,500	\$ 19,500	-
Minor Structures	\$ 12,000	\$ 12,000	-
Dragging	\$ 10,000	\$ 10,000	-
MEO Equipment Costs	\$ 27,000	\$ 27,000	-
Maintenance Yard Overhead	\$ 15,000	\$ 15,000	-
Telemetry Maintenance	\$ 15,000	\$ 15,000	-
Engineering Support	\$ 5,000	\$ 5,000	-
Environmental Support	\$ 10,000	\$ 10,000	-
TOTAL BUDGET	\$ 261,500	\$ 261,500	-

41 Levee Miles

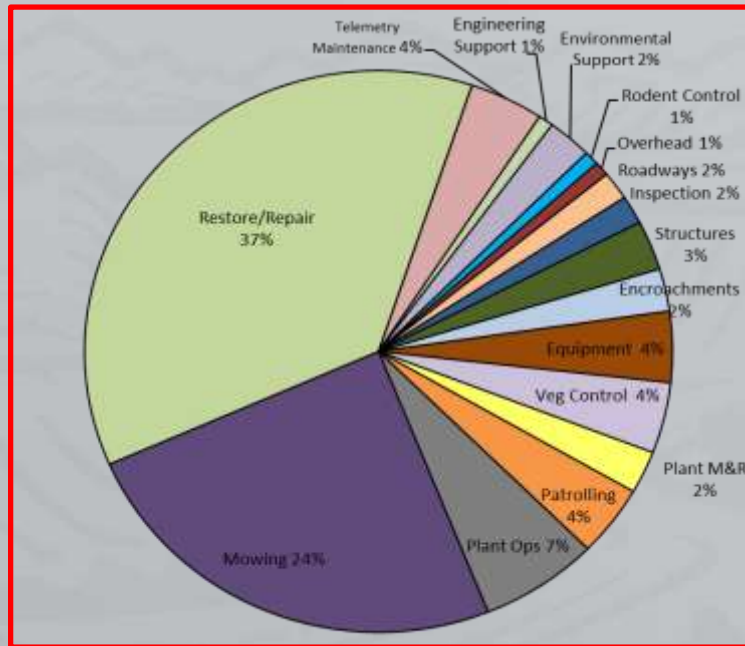


MA16
West Levee
Feather River near Live Oak
FY19/20 - \$96,000 (proposed)
4 Levee Miles

MA16 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 15,000	\$ 15,000	-
Burning	\$ 1,000	\$ 1,000	-
Rodent Control	\$ 10,000	\$ 10,000	-
Patrolling	\$ -	\$ -	-
Mowing	\$ 16,000	\$ 16,000	-
Inspection	\$ 1,000	\$ 1,000	-
Encroachment Removal	\$ 10,000	\$ 10,000	-
Restoration/Repair	\$ 5,000	\$ 25,000	+400%
Crown Roadways	\$ 5,000	\$ 5,000	-
Minor Structures	\$ 2,000	\$ 2,000	-
Dragging	\$ 2,000	\$ 2,000	-
MEO Equipment Costs	\$ 4,000	\$ 4,000	-
Maintenance Yard Overhead	\$ 1,000	\$ 1,000	-
Telemetry Maintenance	\$ -	\$ -	-
Engineering Support	\$ 1,000	\$ 1,000	-
Environmental Support	\$ 3,000	\$ 3,000	-
TOTAL BUDGET	\$ 76,000	\$ 96,000	+26%

4 Levee Miles

**Note: Budget increase for FSRP cost-share on land side levee slope repair
2017 PL 84-99 Repair at not direct cost to MA16**



MA17

Middle Creek at
Clear Lake

FY19/20 - \$122,500 (proposed)

4 Levee Miles



MA17 JOB CATEGORY	2018-2019 APPROVED BUDGET	2019-2020 PROPOSED BUDGET	% Change BUDGET
Vegetation Control	\$ 5,000	\$ 5,000	-
Burning	\$ -	\$ -	-
Rodent Control	\$ 1,000	\$ 1,000	-
Patrolling	\$ 5,000	\$ 5,000	-
Mowing	\$ 30,000	\$ 30,000	-
Inspection	\$ 2,000	\$ 2,000	-
Encroachment Removal	\$ 3,000	\$ 3,000	-
Restoration/Repair	\$ 25,000	\$ 45,000	+80%
Crown Roadways	\$ 2,000	\$ 2,000	-
Minor Structures	\$ 3,500	\$ 3,500	-
Dragging	\$ -	\$ -	-
Plant Maintenance & Repairs	\$ 3,000	\$ 3,000	-
Plant Operations	\$ 8,000	\$ 8,000	-
MEO Equipment Costs	\$ 5,000	\$ 5,000	-
Maintenance Yard Overhead	\$ 1,000	\$ 1,000	-
Telemetry Maintenance	\$ 25,000	\$ 5,000	-80%
Engineering Support	\$ 1,000	\$ 1,000	-
Environmental Support	\$ 3,000	\$ 3,000	-
TOTAL BUDGET	\$ 122,500	\$ 122,500	-

4 Levee Miles



Proposed Budget Same as Previous Year

MA04, MA05, MA09, MA12, MA13, MA17

Proposed Budget Increase (%)

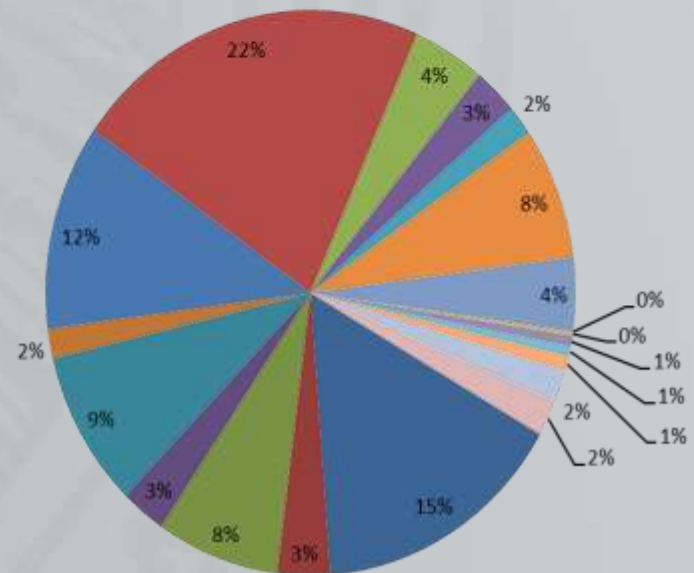
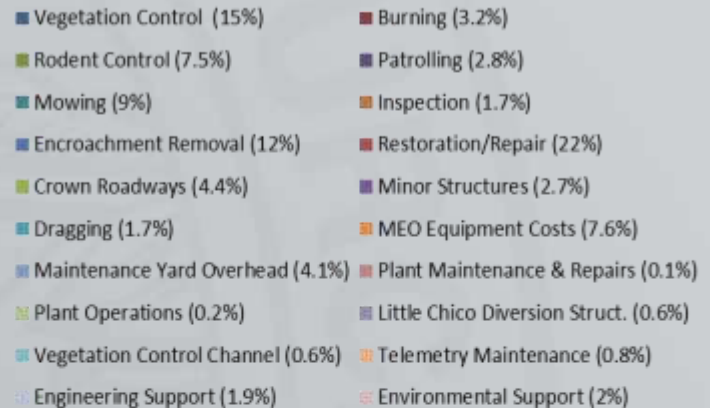
MA01 (.9%), MA03 (2%), MA07 (16%), MA 16 (30%)

FY 2018/19 Projected Expend: \$2,889,763

FY 2018/19 Approved Budget: \$3,344,197

FY 2019/20 Proposed Budget: \$3,389,197

FY 2019-2020 Average Maintenance Area Costs



149 Levee Miles

Overall 1% Increase for FY 2019/20



Proposed Budget Same as Previous Year

MA04, MA05, MA09, MA12, MA13, MA17

Proposed Budget Increase (%)

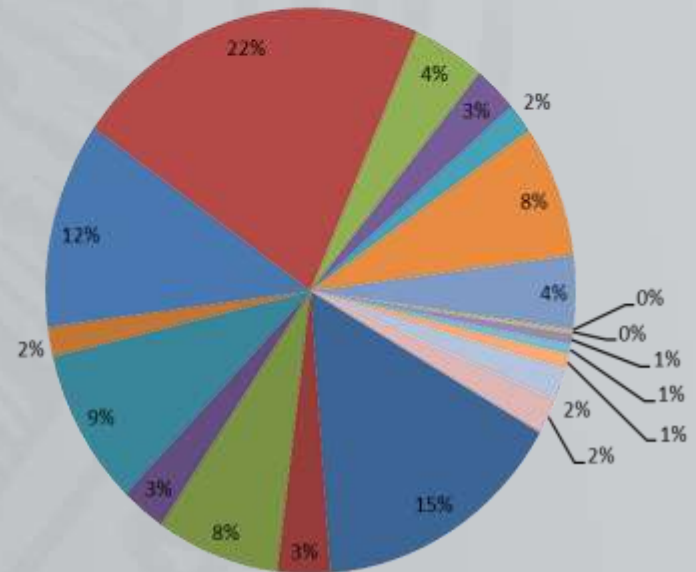
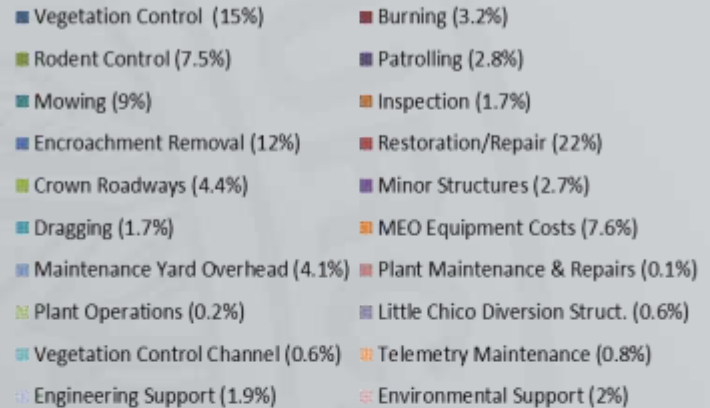
MA01 (.9%), MA03 (2%), MA07 (16%), MA 16 (30%)

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FY 2018/19 Approved Budget: \$3,344,197

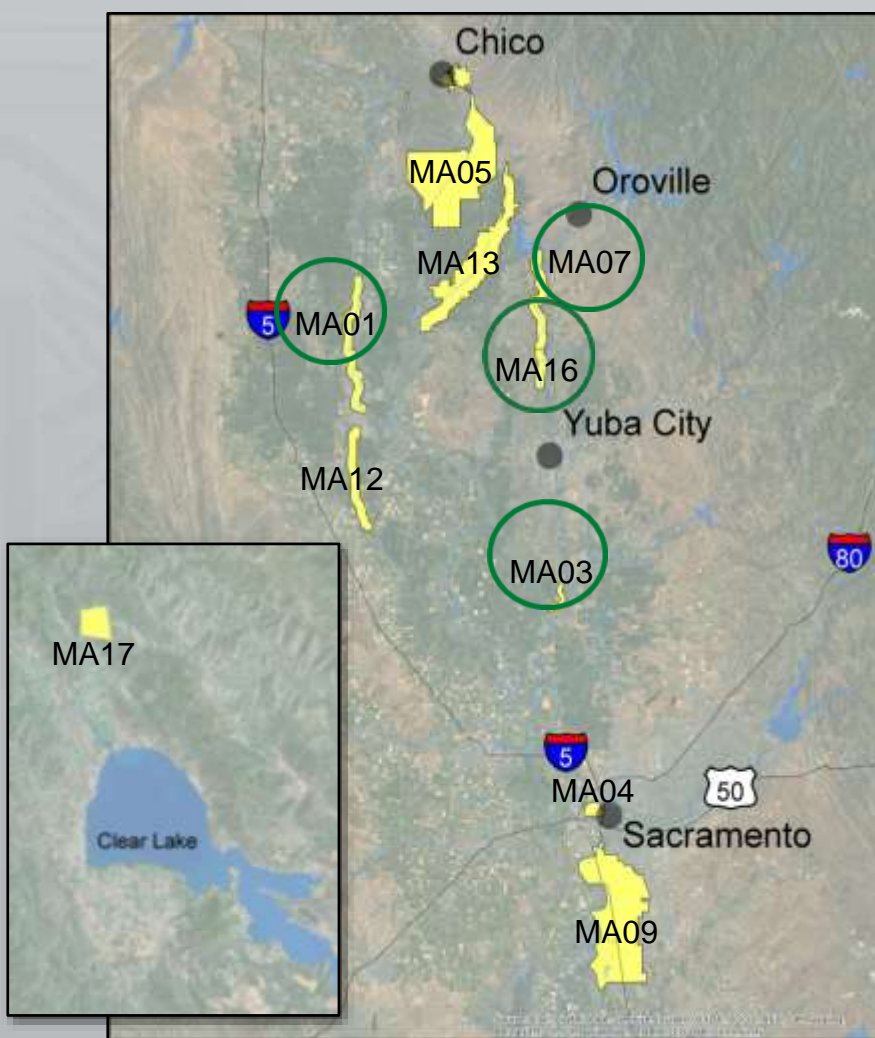
FY 2019/20 Proposed Budget: \$3,389,197

FY 2019-2020 Average Maintenance Area Costs



149 Levee Miles

Overall 1% Increase for FY 2019/20



Proposed Budget Same as Previous Year

MA04, MA05, MA09, MA12, MA13, MA17

Proposed Budget Increase (%)

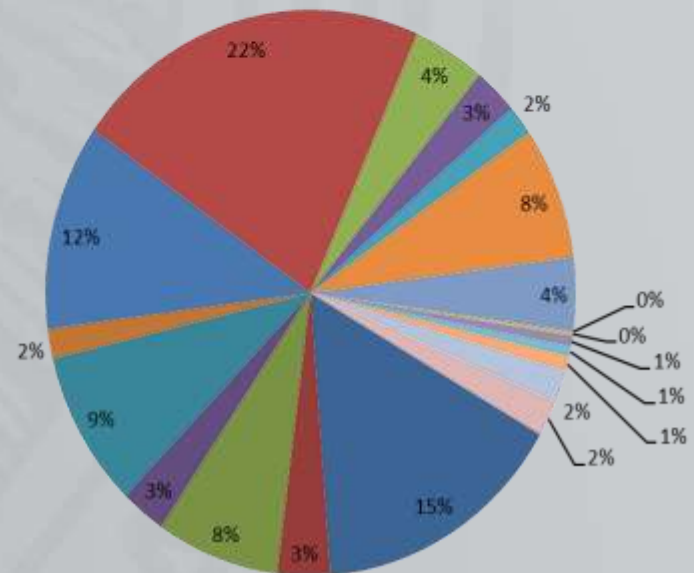
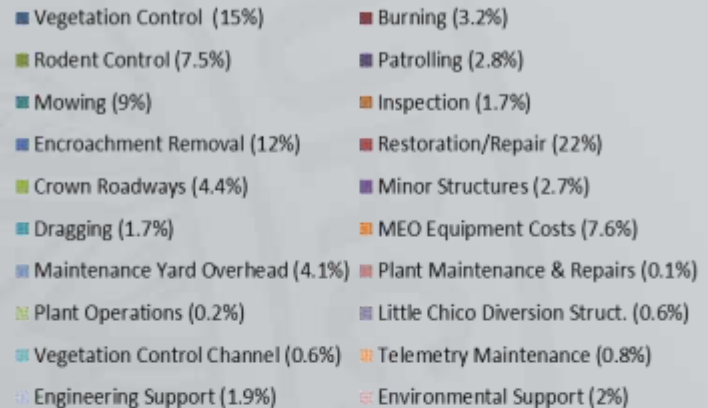
MA01 (.9%), MA03 (2%), MA07 (16%), MA 16 (30%)

FY 2018/19 Projected Expend: \$2,889,763

FY 2018/19 Approved Budget: \$3,344,197

FY 2019/20 Proposed Budget: \$3,389,197

FY 2019-2020 Average Maintenance Area Costs



149 Levee Miles

Overall 1% Increase for FY 2019/20

Requested Board Action

- DWR requests the Central Valley Flood Protection Board Adopt the Fiscal Year 2019/20 Maintenance Area Budgets as presented, pursuant to California Water Code Section 12878, et. seq.
- Applicable California Water Code Sections:
 - 12878.27 – DWR provides annual cost estimate
 - 12878.28 – Hearing held after April 1
 - 12878.29 – Notice of Hearing; publication
 - 12878.32 – Fixing amount of estimate

Requested Board Action:

Adopt Proposed Budget as Presented

California Water Code 12878 et seq.

Relevant Sections

Cal. Water Code § 12878 (f) "Maintenance" means work described as maintenance by the federal regulations issued by the Secretary of the Army, the Secretary of Agriculture, the department, or the board for any project.

Cal. Water Code § 12878.21. Upon the formation of a maintenance area, the department shall thereafter operate and maintain the unit until such time as the maintenance area may be dissolved pursuant to this chapter. If the board or the department forms a maintenance area for a portion of a unit of a project, any remaining portion of the unit of a project not included in the maintenance area shall remain the responsibility of the local agency obligated to operate and maintain that unit.

Cal. Water Code §12878.27. The department shall, prior to the first day of April of each year, estimate the cost of the operation and maintenance of each unit during the ensuing fiscal year and during the current fiscal year where no assessment has been levied or collected for the current fiscal year and adjust such estimates as provided in Section 12878.44. The department shall transmit a copy of such estimates to the board as to all units within the jurisdiction of the board.

Cal. Water Code §12878.28. Following the first day of April of each year, the board or department shall hold a hearing at Sacramento on the matter of fixing the estimates and assessments for all units to be operated or maintained by the department pursuant to this chapter.

Cal. Water Code §12878.29. Notice of the hearing shall be given by publication in at least one newspaper of general circulation in each maintenance area affected for at least once a week for two successive weeks.

Cal. Water Code §12878.30. The notice shall set the time and place of the hearing which shall be held not less than 10 days following the completion of publication as to all maintenance areas, and shall state that the purpose of the hearing is to confirm or modify or revise the program of work to be performed on the units for which estimates have been made pursuant to Section 12878.27, and to determine the necessity for such work and the amount of the estimates therefor.

Cal. Water Code §12878.31. At the hearing any owner of land in any maintenance area affected, or other interested person may offer, and the board or department shall receive, any relevant evidence or testimony concerning the proposed program of work relating to any such unit, the necessity for such work, or the estimate of the cost thereof.

Cal. Water Code §12878.32. Upon the final conclusion of such hearing the board or department shall fix the amount of the estimate for each such unit for all purposes of the assessments provided for in this article, and in all cases where the board fixes the said amount it shall immediately notify the department of the amounts thereof.

DWR Actions in Response to Periodic Inspection Results

Maintenance Area Periodic Inspection – PL 84-99 Status

MA 9

- Part of the American River Left Bank Levee System – **PL 84-99 Active Status**
- ***LOI Approved (10/1/2013); Progress Report Approved (2/19/15); SWIF submitted (5/14/2016); reviewed by USACE and modified and resubmitted 12/18/17***
- Partners: DWR (MA9), **City of Sacramento (Lead)**, and American River Flood Control District
- CVFPB Encroachment Enforcement Pilot Program for MA9

MA 3, MA 7, MA 16

- Part of the Feather River System– **PL 84-99 Active Status**
- ***LOI Approved (2/24/2014); Progress Report Approved (3/22/16); SWIF submitted (2/24/2017) and under review by USACE***
- Partners: DWR (MA3, MA7, MA16, HAM1, SBP2, WAD1), LD9, LD1, and **SBFCA (Lead)**

MA 1, MA 12

- Part of the Sac River West Levee System Draft LOI **PL 84-99 Active Status**
- ***LOI Approved (3/9/15); Progress Report Approved (3/18/16); SWIF submitted (3/9/2017) and under review by USACE***
- Partners: DWR (MA1, MA12), **RD 108 (Lead)**, SWS, LD1, LD2

DWR Actions in Response to Periodic Inspection Results

Maintenance Area Periodic Inspection – PL 84-99 Status

MA 5

- Butte Creek Left Bank and Butte Creek Right Bank Levee Systems
PL 84-99 Active Status
- ***LOI approved (7/6/17)***
- Biological Assessment and Request for Section 7 ESA Consultation submitted to USACE for Interim Risk Reduction Measures (January 2018)

MA 13

- Cherokee Canal Levee Systems **PL 84-99 Active Status**
- ***LOI approved (5/18/17)***

MA 4

- Part of the West Sacramento – Sac Yolo South Levee System
PL 84-99 Inactive Status
- ***LOI formally submitted (11/6/17) for northern urban portion of levee system and currently under review by USACE***
- USACE has approved system separation.
- Partners: DWR (MA4), RD-900, RD 537, **Lead: WSAFCA**

MA 17

- Middle Creek Levee System (MC1C and MC1D) **PL 84-99 Inactive Status**
- ***Currently evaluating LOI submittal with Lake County Flood Control and Water Conservation District***

Questions

Mark List

Flood Maintenance Office

Division of Flood Management

Department of Water Resources

Mark.List@water.ca.gov